

CLAIMS:

1. A method for driving an organic LED display device having a first and a second electrode (1, 2) sandwiching an organic layer (3) defining a plurality of light emitting elements (15), said method comprising: applying (S1, S2) to a light emitting element (15) a voltage within a specified voltage range, within which the risk of short circuits between the electrodes (1, 2) is reduced, and controlling (S3) the duty cycle of said light emitting element (15), so that a desired light intensity is emitted from said light emitting element (15).
5
2. A method according to claim 1, wherein the duty cycle of said light emitting element is decreased in order to emit a desired light intensity without requiring an applied voltage below a specified lower limit.
10
3. A method according to claim 1, wherein a default duty cycle of said light emitting element is less than 100%, and wherein said duty cycle is increased in order to emit a desired light intensity without requiring an applied voltage above a specified upper limit.
15
4. A method according to claims 2 or 3, further comprising: determining an expected voltage change over time, required to maintain a constant drive current in said light emitting element, and adjusting the duty cycle of said light emitting element accordingly.
20
5. A method according to claims 2 or 3, further comprising: monitoring an average pixel voltage in the display, and adjusting the duty cycle of each light emitting element in accordance with this average voltage.
25

6. A method according to claims 2 or 3, further comprising: monitoring a voltage of a light emitting element, and adjusting the duty cycle of said light emitting element in accordance with this voltage.

5 7. A method according to any one of the preceding claims, wherein said duty cycle is controlled over each frame.

8. A method according to claim 1 - 6, wherein the duty cycle is controlled over a plurality of frames.

10

9. A method according to any one of the preceding claims, wherein said display device is of active matrix type.

10. A method according to claim 9, wherein the duty cycle is controlled for
15 each light emitting element individually.

11. A method according to claim 9, wherein the duty cycle is controlled for a plurality of light emitting elements jointly.

20 12. A method according to claim 8, wherein the display device is of passive matrix type.

13. An organic display device, arranged to be driven according to one of the preceding claims.

25

14. An organic display device having a first and a second electrode (1, 2) sandwiching an organic layer (3) defining a plurality of light emitting elements (15), further comprising: means (13, 14) for applying a voltage to a light emitting element (15), said voltage lying in a specified voltage range within which the risk of short
30 circuits between the electrodes (1, 2) is reduced, and means (16, 17; 21; 22) for

controlling the duty cycle of said light emitting element (15), so that a desired light intensity is emitted from said light emitting element (15).

15. A device according to claim 14, wherein said controlling means (16, 17; 5 21; 22) are arranged to decrease the duty cycle in order to emit a desired light intensity without requiring an applied voltage below a specified lower limit.

16. A device according to claim 14, wherein said controlling means (16, 17; 10 21; 22) are arranged to maintain a default duty cycle of said light emitting element less than 100%, and to increase the duty cycle in order to emit a desired light intensity without requiring an applied voltage above a specified upper limit.

17. A device according to one of claims 14 – 16, wherein said controlling means comprises a transistor (16), connected between the light emitting element (15 and 15 15) the voltage applying means (13, 14), and a duty cycle controller (17), connected to the gate of the transistor (16).

18. A device according to one of claims 14 – 16, wherein said controlling means comprises a duty cycle controller (21) connected to the voltage applying means 20 (14).

19. A device according to one of claims 14 – 16, wherein said controlling means comprises a duty cycle controller (22) connected to the other side of the light emitting element (15) in relation to the voltage applying means (13, 14).

25

20. A device according to any one of claims 14 – 19, wherein said voltage applying means comprises a power line (14) and a drive transistor (13) connected between the power line and the light emitting element (15).

14

21. A device according to any one of claims 14 – 20, wherein said controlling means (16, 17; 21; 22) are arranged to jointly control the duty cycle for a plurality of light emitting elements.

5